

0050/505206 - MARKED VERSION OF AMENDED CLAIMS

3. A process as claimed in claim 1 [or 2], wherein the adsorption layer comprises a zeolite of the type ZSM-5, ZSM-11, ZSM-12, ZSM-22, ZSM-23, ZSM-35, ZSM-48, beta-zeolite, zeolite Y, dealuminated zeolite Y, mordenites, zeolite MCM-22, MCM-41, MCM-49 or MCM-56.
4. A process as claimed in claim 1 [any of claims 1 to 3], wherein the adsorption layer is located in a fixed-bed reactor.
5. A process as claimed in claim 1 [any of claims 1 to 4], wherein the feed stream is passed over the adsorption layer at from 0 to 300°C and a pressure in the range from 1 to 45 bar.
6. A process as claimed in claim 1 [any of claims 1 to 5], wherein the olefin used is ethylene or propylene.
7. A process as claimed in claim 1 [any of claims 1 to 6], wherein the catalysts used are Lewis acids or zeolites.
8. A process as claimed in claim 1 [any of claims 1 to 7], wherein the reaction is carried out in the liquid or gaseous phase.
9. A process as claimed in claim 1 [any of claims 1 to 8], wherein benzene-containing feed streams are also passed over an adsorption layer.